

1st International Forum on Zygomycosis, 30 May to 1 June 2008

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Zygomycetes are being increasingly recognized as important opportunistic pathogens in immunocompromised hosts, especially diabetics, haematological patients, and transplant recipients. Recent reports have indicated an increase in the incidence of zygomycosis in cancer centres in both Europe and the USA. Cases can be either sporadic or, in the hospital setting, related to outbreaks. Zygomycetes are found in a wide variety of habitats, and their life cycles differ accordingly. The rapid growth of these fungi and their widespread dispersal in the environment undoubtedly mean that most individuals come into regular contact with these organisms. In susceptible hosts, the infections—including rhinocerebral, pulmonary and disseminated disease—can be devastating and cause high rates of morbidity and mortality. Conflicting data exist with regard to the contribution of newer antifungal agents, such as voriconazole, as risk factors for zygomycosis. Although survival rates have improved, outcomes in patients with zygomycosis remain suboptimal. Combination antifungal therapies, as well as unique interactions of calcineurin inhibitor immunosuppressive agents with antifungals, have potentially relevant implications for optimizing outcomes in cases of zygomycosis.

There are still many unresolved issues regarding the epidemiology, diagnosis and treatment of zygomycosis. New aetiological agents are being reported from hitherto unknown ecological niches, molecular diagnostic methods have been developed, and new antifungal treatment modalities have been explored in animal models and patients. Liposomal amphotericin B has been used extensively for these infections, and the role of posaconazole is being assessed. A greater understanding of the role of iron in the pathogenesis of zygomycosis has led to the development of iron chelation therapy as adjunctive treatment.

The survey of zygomycosis in Europe undertaken by a European Confederation of Medical Mycology (ECMM) Working Group, with support from Gilead Sciences (Europe) Ltd, has contributed useful data to our understanding of many aspects of the disease, and is the first large prospective epidemiological study to be undertaken. The wide interest in this exercise suggested the creation of a series of symposia to address current issues regarding zygomycosis. The Hellenic Society of Medical Mycology, under the auspices of the ECMM, organized the 1st International Forum on Zygomycosis, supported by an unrestricted educational grant from Gilead Sciences (Europe) Ltd. A group of investigators and clinicians from Europe and the USA, including infectious diseases specialists, haematologists, microbiologists, and surgeons, gathered together at the end of May 2008 and debated a diverse range of topics. Themes included the biology of the Zygomycetes; recent trends in epidemiology, risk factors and pathogenesis; the broadening range of clinical presentations; diagnosis; and, treatment. Our intention is to bring together in this supplement of *Clinical Microbiology and Infection* our current knowledge and understanding of what appears to be an emerging fungal infection.

Transparency Declaration

G. Petrikos has received research grants from Gilead, Pfizer, Schering-Plough, Aventis, Elli Lilly, and MSD, has acted as paid consultant to Janssen Cilag, Gilead, Astellas, and Schering-Plough, and is a member of the Gilead, Schering-Plough and MSD speaker's bureaus. M. Richardson has acted as a paid consultant of Gilead Sciences (Europe) Ltd and is a member of the Astellas, Schering-Plough Inc., Pfizer Ltd and MSD speaker's bureaus. E. Roilides has received research grants from Pfizer, Gilead, Enzon, and Schering, has acted as a paid consultant to Schering, Gilead, Astellas, and Pfizer, and is a member of the Gilead, Cephalon, Pfizer, Wyeth, Schering, Merck and Aventis speaker's bureaus.